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\* \* \* \* \* \* \* \* \* Welcome to STN International \* \* \* \* \* \* \* \* \*

NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 3 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 4 AUG 13 CA/CAplus enhanced with additional kind codes for granted patents  
NEWS 5 AUG 20 CA/CAplus enhanced with CAS indexing in pre-1907 records  
NEWS 6 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB  
NEWS 7 AUG 27 USPATOLD now available on STN  
NEWS 8 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data  
NEWS 9 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index  
NEWS 10 SEP 13 FORIS renamed to SOFIS  
NEWS 11 SEP 13 INPADOCDB enhanced with monthly SDI frequency  
NEWS 12 SEP 17 CA/CAplus enhanced with printed CA page images from 1967-1998  
NEWS 13 SEP 17 CAplus coverage extended to include traditional medicine patents  
NEWS 14 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements  
NEWS 15 OCT 02 CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt  
NEWS 16 OCT 19 BEILSTEIN updated with new compounds  
NEWS 17 NOV 15 Derwent Indian patent publication number format enhanced  
NEWS 18 NOV 19 WPIX enhanced with XML display format  
NEWS 19 NOV 30 ICSD reloaded with enhancements  
NEWS 20 DEC 04 LINPADOCDB now available on STN  
NEWS 21 DEC 14 BEILSTEIN pricing structure to change  
NEWS 22 DEC 17 USPATOLD added to additional database clusters  
NEWS 23 DEC 17 IMSDRUGCONF removed from database clusters and STN  
NEWS 24 DEC 17 DGENE now includes more than 10 million sequences  
NEWS 25 DEC 17 TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment  
NEWS 26 DEC 17 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary  
NEWS 27 DEC 17 CA/CAplus enhanced with new custom IPC display formats  
NEWS 28 DEC 17 STN Viewer enhanced with full-text patent content from USPATOLD  
NEWS 29 JAN 02 STN pricing information for 2008 now available  
NEWS 30 JAN 16 CAS patent coverage enhanced to include exemplified prophetic substances  
NEWS 31 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats  
NEWS 32 JAN 28 MARPAT searching enhanced  
NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication  
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment

NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements  
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

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FILE 'HOME' ENTERED AT 08:21:19 ON 12 FEB 2008

FILE 'REGISTRY' ENTERED AT 08:21:28 ON 12 FEB 2008  
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STRUCTURE FILE UPDATES: 11 FEB 2008 HIGHEST RN 1002789-56-1  
DICTIONARY FILE UPDATES: 11 FEB 2008 HIGHEST RN 1002789-56-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

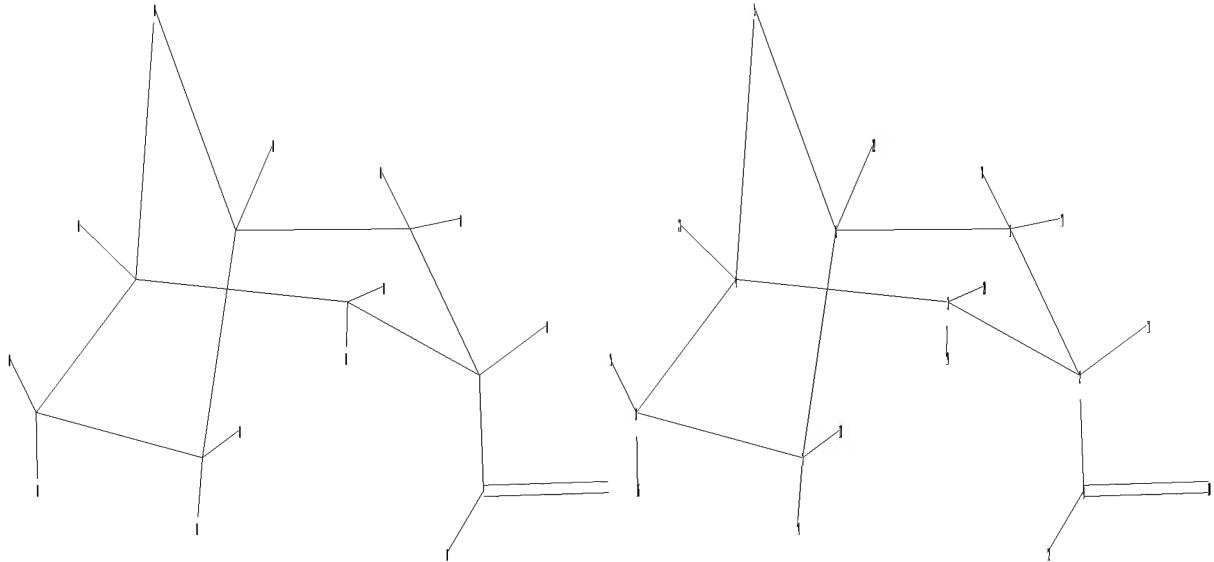
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10565046.str



chain nodes :  
 9 10 11 12 13 14 15 16 17 18 19 20 21 22  
 ring nodes :

1 2 3 4 5 6 7 8

chain bonds :  
 1-17 1-18 2-9 2-11 3-19 3-20 4-21 6-22 7-13 7-14 8-15 8-16 9-10 9-12

ring bonds :

1-2 1-6 2-3 3-4 4-5 4-8 5-6 6-7 7-8

exact/norm bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

1-17 1-18 2-9 2-11 3-19 3-20 4-8 4-21 6-7 6-22 7-8 7-13 7-14 8-15  
 8-16 9-10 9-12

isolated ring systems :

containing 1 :

Match level :  
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:CLASS 10:CLASS  
 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS  
 19:CLASS 20:CLASS 21:CLASS 22:CLASS

L1 STRUCTURE UPLOADED

=> s 11  
 SAMPLE SEARCH INITIATED 08:21:42 FILE 'REGISTRY'  
 SAMPLE SCREEN SEARCH COMPLETED - 89 TO ITERATE

100.0% PROCESSED 89 ITERATIONS  
 SEARCH TIME: 00.00.01

5 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 1214 TO 2346  
PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

=> s 11 full  
FULL SEARCH INITIATED 08:21:48 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 1821 TO ITERATE

100.0% PROCESSED 1821 ITERATIONS 116 ANSWERS  
SEARCH TIME: 00.00.01

L3 116 SEA SSS FUL L1

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
SESSION  
FULL ESTIMATED COST 178.36 178.57

FILE 'CAPLUS' ENTERED AT 08:21:53 ON 12 FEB 2008  
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FILE COVERS 1907 - 12 Feb 2008 VOL 148 ISS 7  
FILE LAST UPDATED: 11 Feb 2008 (20080211/ED)

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<http://www.cas.org/infopolicy.html>

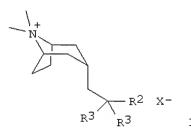
=> s 13 full  
L4 13 L3

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007146107 CAPLUS  
 DOCUMENT NUMBER: 146:229203  
 TITLE: Preparation of azoniabicyclooctanes as M3 muscarinic acetylcholine receptor antagonists.  
 INVENTOR(S): Busch-Petersen, Jakob; Laine, Dramane Ibrahim; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei; Xie, Haibo  
 PATENT ASSIGNEE(S): Glaxo Group Limited, UK  
 SOURCE: PCT Int. Appl., 42pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

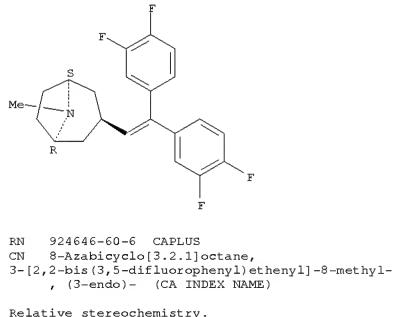
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007016639	A2	20070208	WO 2006-US30153	20060802
WO 2007016639	A3	20070705		
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RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CP, CO, CI, CM, CR, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OR			
PRIORITY APPLN. INFO.:		US 2005-704579P		P 20050802

OTHER SOURCE(S): MARPAT 146:229203  
 GI



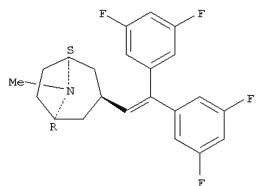
AB Title compds. [I; R1, R2 = (substituted) Ph, thiienyl, pyridyl, PhCH<sub>2</sub>, pyrimidinyl, thiazolyl, isothiazolyl, cycloalkyl, etc.; R3 = H, OH; X = physiol. acceptable anion], were prepared for treatment of chronic obstructive pulmonary disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, 2-[3-(3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl]-1,1-bis(3-methyl-2-thienyl)ethanol (preparation given) was treated with MeBr in *tert*-Bu Me ether to give 61% (3-endo)-3-[2-hydroxy-2-bis(3-methyl-2-thienyl)ethyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide.

L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



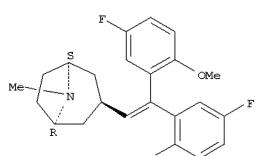
RN 924646-60-6 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3,4-difluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



RN 924646-62-8 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methoxyphenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

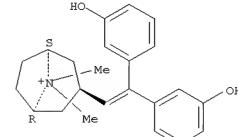
Relative stereochemistry.



L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 IT 924646-34-4P 924646-56-0P 924646-58-2P  
 924646-60-6P 924646-62-8P 924646-66-2P  
 924646-84-4P 924646-85-5P 924646-86-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of azoniabicyclooctanes as M3 muscarinic acetylcholine receptor antagonists)

RN 924646-34-4 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3-hydroxyphenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

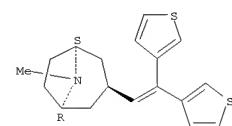
Relative stereochemistry.



● Br<sup>-</sup>

RN 924646-56-0 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-di-3-thienylethenyl)-8-methyl-, (3-exo)- (CA INDEX NAME)

Relative stereochemistry.



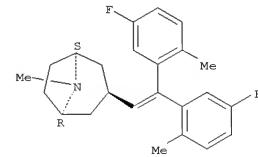
RN 924646-58-2 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methylphenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

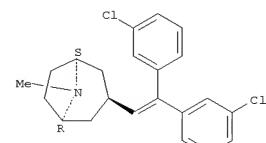
RN 924646-66-2 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methylphenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



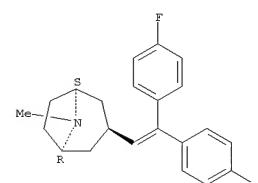
RN 924646-84-4 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3-chlorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



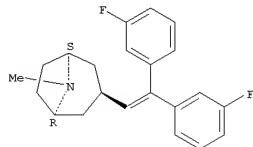
RN 924646-85-5 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(4-fluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
RN 924646-86-6 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3-fluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

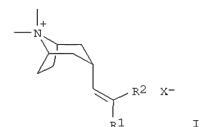
Relative stereochemistry.



L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
ACCESION NUMBER: 2007144089 CAPLUS  
DOCUMENT NUMBER: 146229182  
TITLE: Preparation of 3-(arylethenyl)-8,8-dimethyl-8-azoniariboclo[3.2.1]octanes as M3 muscarinic acetylcholine receptor antagonists.  
INVENTOR(S): Busch-Petersen, Jakob; Laine, Dramane Ibrahim; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei; Xie, Haibo  
PATENT ASSIGNEE(S): Glaxo Group Limited, UK  
SOURCE: PCT Int. Appl., 35pp.  
CODEN: PIXKD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007016650	A2	20070208	WO 2006-US30218	20060802
WO 2007016650	A3	20070531		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MW, MZ, NA, NC, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CO, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AF, EA, EF, OA			US 2005-704578P	P 20050802

PRIORITY APPN. INFO.: MARPAT 146:229182  
OTHER SOURCE(S): GI



AB Title compds. [I]; R1, R2 = (substituted) Ph, thiienyl, pyridyl, PhCH<sub>2</sub>, pyrimidinyl, thiazolyl, isothiazolyl, cycloalkyl, etc.; X = pharmaceutically acceptable counterion, were prepared for treatment of COPD, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, (endo)-3-[2,2-bis(3-hydroxyphenyl)ethenyl]-8,8-dimethyl-8-azoniariboclo[3.2.1]octane bromide was prepared from tri-Me

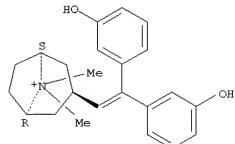
L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
IT 924646-34-4P 924646-35-5P 924646-36-6P  
924646-37-7P 924646-38-8P 924646-39-9P  
924646-40-2P 924646-41-3P 924646-42-4P  
924646-43-5P 924646-44-6P 924646-45-7P  
924646-46-8P 924646-47-9P 924646-48-0P  
924646-49-1P 924646-50-4P 924646-51-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(claimed compound; preparation of arylethene dimethylazoniariboclooctanes as M3 muscarinic acetylcholine receptor antagonists)

RN 924646-34-4 CAPLUS  
CN 8-Azoniariboclo[3.2.1]octane, 3-[2,2-bis(3-hydroxyphenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

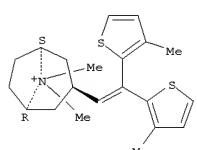
Relative stereochemistry.



● Br<sup>-</sup>

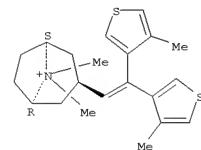
RN 924646-35-5 CAPLUS  
CN 8-Azoniariboclo[3.2.1]octane, 3-[2,2-bis(3-methyl-2-thienyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
RN 924646-36-6 CAPLUS  
CN 8-Azoniariboclo[3.2.1]octane, 3-[2,2-bis(4-methyl-3-thienyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

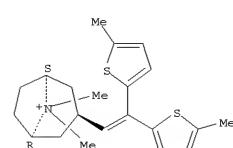
Relative stereochemistry.



● Br<sup>-</sup>

RN 924646-37-7 CAPLUS  
CN 8-Azoniariboclo[3.2.1]octane, 3-[2,2-bis(5-methyl-2-thienyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

Relative stereochemistry.

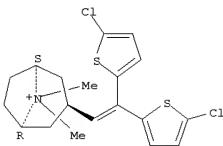


● Br<sup>-</sup>

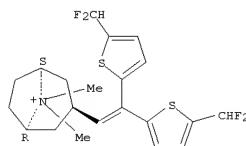
RN 924646-38-8 CAPLUS  
CN 8-Azoniariboclo[3.2.1]octane, 3-[2,2-bis(5-chloro-2-thienyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

Relative stereochemistry.

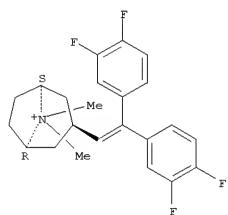
● Br<sup>-</sup>

● Br<sup>-</sup>

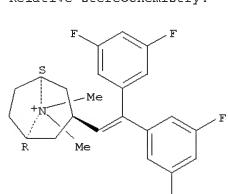
RN 924646-39-9 CAPLUS  
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Relative stereochemistry.

● Br<sup>-</sup>

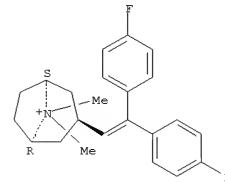
RN 924646-40-2 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-[2,2-bis(4-fluorophenyl)ethenyl]-8,8-dimethyl-, iodide (1:1), (3-endo)- (CA INDEX NAME)  
Relative stereochemistry.

● Br<sup>-</sup>

RN 924646-43-5 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-[2,2-bis(3,5-difluorophenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-exo)- (CA INDEX NAME)  
Relative stereochemistry.

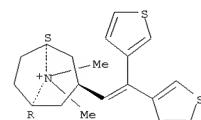
● Br<sup>-</sup>

RN 924646-44-6 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methoxyphenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)  
Relative stereochemistry.

● I<sup>-</sup>

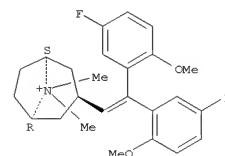
RN 924646-41-3 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-(2,2-di-3-thienylethenyl)-8,8-dimethyl-, iodide (1:1), (3-endo)- (CA INDEX NAME)

Relative stereochemistry.

● I<sup>-</sup>

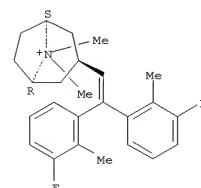
RN 924646-42-4 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-[2,2-bis(3,4-difluorophenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-exo)- (CA INDEX NAME)

Relative stereochemistry.

● Br<sup>-</sup>

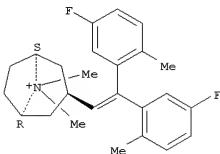
RN 924646-45-7 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-[2,2-bis(3-fluoro-2-methylphenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-exo)- (CA INDEX NAME)

Relative stereochemistry.

● Br<sup>-</sup>

RN 924646-46-8 CAPLUS  
CN 8-Azonabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methylphenyl)ethenyl]-8,8-dimethyl-, iodide (1:1), (3-exo)- (CA INDEX NAME)

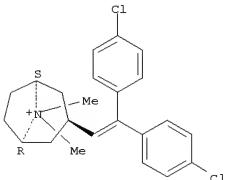
Relative stereochemistry.



● I-

RN 924646-47-9 CAPLUS  
CN 8-Azoniambicyclo[3.2.1]octane, 3-[2,2-bis(4-chlorophenyl)ethenyl]-8,8-dimethyl-, iodide (1:1), (3-endo)- (CA INDEX NAME)

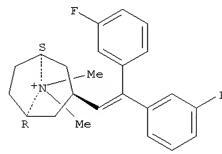
Relative stereochemistry.



● I-

RN 924646-48-0 CAPLUS  
CN 8-Azoniambicyclo[3.2.1]octane, 3-[2,2-bis(3-fluorophenyl)ethenyl]-8,8-dimethyl-, iodide (1:1), (3-endo)- (CA INDEX NAME)

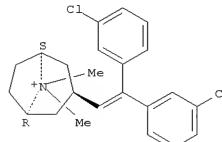
Relative stereochemistry.



● I-

RN 924646-49-1 CAPLUS  
CN 8-Azoniambicyclo[3.2.1]octane, 3-[2,2-bis(3-chlorophenyl)ethenyl]-8,8-dimethyl-, iodide (1:1), (3-endo)- (CA INDEX NAME)

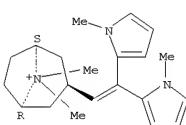
Relative stereochemistry.



● I-

RN 924646-50-4 CAPLUS  
CN 8-Azoniambicyclo[3.2.1]octane, 3-[2,2-bis(1-methyl-1H-pyrrol-2-yl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

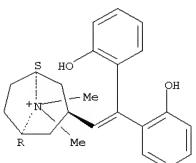
Relative stereochemistry.



● Br-

RN 924646-51-5 CAPLUS  
CN 8-Azoniambicyclo[3.2.1]octane, 3-[2,2-bis(2-hydroxyphenyl)ethenyl]-8,8-dimethyl-, bromide (1:1), (3-endo)- (CA INDEX NAME)

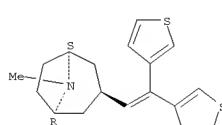
Relative stereochemistry.



● Br-

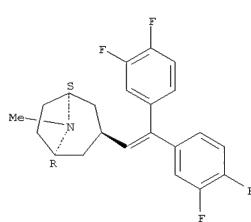
IT 924646-56-0P 924646-58-2P 924646-60-6P  
924646-62-8P 924646-64-0P 924646-66-2P  
924646-83-3P 924646-84-4P 924646-85-5P  
924646-86-6P 924646-87-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of arylethenyldimethylazoniabicyclooctanes as M3 muscarinic acetylcholine receptor antagonists)  
RN 924646-56-0 CAPLUS  
CN 8-Azoniambicyclo[3.2.1]octane, 3-(2,2-di-3-thienylethenyl)-8-methyl-, (3-exo)- (CA INDEX NAME)

Relative stereochemistry.



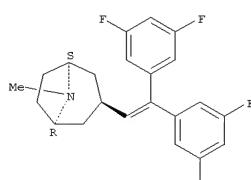
RN 924646-58-2 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3,4-difluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



RN 924646-60-6 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3,5-difluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

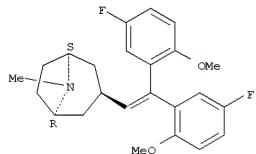
Relative stereochemistry.



RN 924646-62-8 CAPLUS

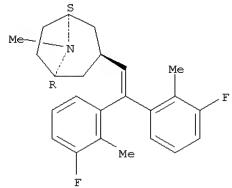
L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methoxyphenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



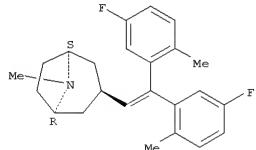
RN 924646-64-0 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3-fluoro-2-methylphenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



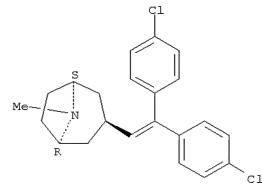
RN 924646-66-2 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(5-fluoro-2-methylphenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



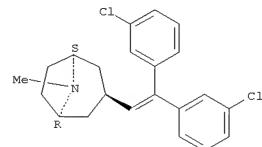
L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 RN 924646-83-3 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(4-chlorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



RN 924646-84-4 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3-chlorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

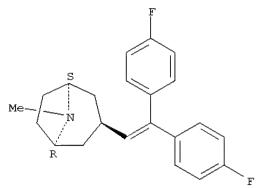
Relative stereochemistry.



RN 924646-85-5 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(4-fluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

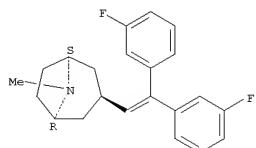
Relative stereochemistry.

L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



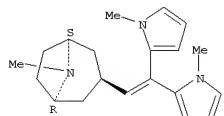
RN 924646-86-6 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(3-fluorophenyl)ethenyl]-8-methyl-, (3-endo)- (CA INDEX NAME)

Relative stereochemistry.



RN 924646-87-7 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(1-methyl-1H-pyrrol-2-yl)ethenyl]-8-methyl-, (3-exo)- (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006-578252 CAPLUS

DOCUMENT NUMBER: 145:55947  
 TITLE: Muscarinic antagonists for the treatment of respiratory diseases  
 INVENTOR(S): Laine, Dramane Ibrahim; Palovich, Michael R.  
 PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006062883	A2	20060615	WO 2005-US43875	20051205
WO 2006062883	A3	20070329		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LR, LS, LT, LU, LY, MA, MD, MG, MZ, NA, NG, NI, NO, OM, PG, PH, PL, PT, RO, SG, SK, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRIORITY APPLN. INFO.:			US 2004-633669P	P 20041206

OTHER SOURCE(S): MARPAT 145:55947

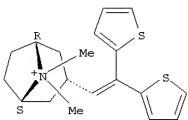
AB This invention relates to derivs. of 8-azabicyclo[3.2.1]octane, pharmaceutical compns. in combination with one or more other therapeutic ingredients, such as  $\beta_2$ -adrenoreceptor agonists, antihistamines, allergy inhibitors, and inflammation inhibitors for the treatment of muscarinic acetylcholine receptor-mediated diseases of the respiratory tract. The claimed combination medication includes (3-endo)-3-(2,2-di-thienylethenyl)-8,8-dimethyl-8-azabicyclo[3.2.1]octane bromide, salmeterol xinafoate, and fluticasone propionate.

IT 102924-25-4 107422-05-9 107894-96-2  
 108042-35-9 834881-95-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

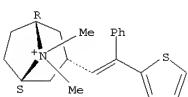
RN 102924-25-4 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-di-2-thienylethenyl)-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

● Br<sup>-</sup>

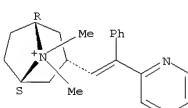
RN 107422-05-9 CAPLUS  
CN 8-Azoniabicyclo[3.2.1]octane, 8,8-dimethyl-3-(2-thienyl)-2-(2-thienyl)ethenyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.

● Br<sup>-</sup>

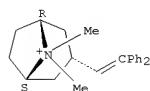
RN 107894-96-2 CAPLUS  
CN 8-Azoniabicyclo[3.2.1]octane, 8,8-dimethyl-3-(2-phenyl-2-(2-pyridinyl)ethenyl)-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.

● Br<sup>-</sup>

RN 108042-35-9 CAPLUS  
CN 8-Azoniabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8,8-dimethyl-,

Relative stereochemistry.

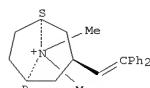
● Br<sup>-</sup>

RN 834881-95-7 CAPLUS  
CN 8-Azoniabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8,8-dimethyl-, (3-endo)-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

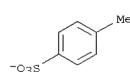
CM 1

CRN 715649-17-5  
CMF C23 H28 N

Relative stereochemistry.



CM 2

CRN 16722-51-3  
CMF C7 H7 O3 S

IT 890126-10-0  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(muscarinic antagonists in combination with other actives for treatment

of respiratory diseases)  
RN 890126-10-0 CAPLUS  
CN Androsta-1,4-diene-17-carbothioic acid, 6,9-difluoro-11-hydroxy-16-methyl-

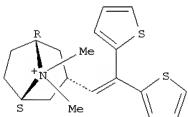
L4 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
3-oxo-17-(1-oxopropoxy)-, S-(fluoromethyl) ester, (6α,11β,16α,17α)-, mixt. with (3-endo)-3-(2,2-di-2-thienylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide and 1-hydroxy-2-naphthalenecarboxylic acid compd. with 4-hydroxy-α-[[(6-(4-phenylbutoxy)hexyl]amino)methyl]-1,3-benzenedimethanol (1:1) (9CI)

(CA INDEX NAME)

CM 1

CRN 102924-25-4  
CMF C19 H24 N S2 . Br

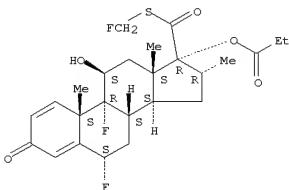
Relative stereochemistry.

● Br<sup>-</sup>

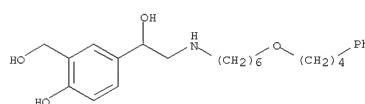
CM 2

CRN 80474-14-2  
CMF C25 H31 F3 O5 S

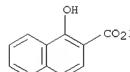
Absolute stereochemistry.



CM 3

CRN 94749-08-3  
CMF C25 H37 N O4 . C11 H8 O3CRN 89365-50-4  
CMF C25 H37 N O4

CM 5

CRN 86-48-6  
CMF C11 H8 O3

L4 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 20061558688 CAPLUS  
 DOCUMENT NUMBER: 14540272  
 TITLE: Muscarinic antagonists in combination with  $\beta$ -adrenoreceptor agonists and/or anti-inflammatories for the treatment of respiratory diseases  
 INVENTOR(S): Laine, Dramane Ibrahim; Palovich, Michael R.  
 PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA  
 SOURCE: PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006062931	A2	20060615	WO 2005-US44033	20051205
WO 2006062931	A3	20070419		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KW, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CO, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OR	P: 2004-633618P	P: 20041206		
PRIORITY APPLN. INFO.:				

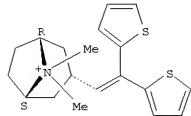
AB This invention relates to a combination of (3-endo)-3-(2,2-di-thienylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide, with one or more other therapeutic ingredients selected from  $\beta$ -adrenoreceptor agonists and inflammation inhibitors for the treatment of muscarinic acetylcholine receptor-mediated diseases of the respiratory tract. A claimed combination medication includes (3-endo)-3-(2,2-di-thienylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide, salmeterol xinafoate, and fluticasone propionate.

IT 102924-25-0  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (muscarinic antagonists in combination with  $\beta$ -2-adrenoreceptor agonists and/or anti-inflammatories for treatment of respiratory diseases)

RN 102924-25-4 CAPLUS  
 CN 8-Azoniabicyclo[3.2.1]octane, 3-(2,2-di-2-thienylethenyl)-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



● Br-

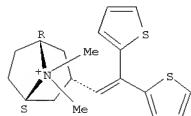
RN 890126-10-0 CAPLUS  
 CN Androsta-1,4-diene-17-carbothioic acid, 6,9-difluoro-11-hydroxy-16-methyl-3-oxo-17-(1-oxopropoxy)-, S-(fluoromethyl) ester, (6a,11b,16a,17a)-, mixt. with (3-endo)-3-(2,2-di-2-thienylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide and 1-hydroxy-2-naphthalenecarboxylic acid compd. with 4-hydroxy- $\alpha$ 1-[[(6-(4-phenoxybutyloxy)hexyl)amino)methyl]-1,3-benzenedimethanol (1:1) (9CI) (CA INDEX NAME)

(CA INDEX NAME)

CM 1

CRN 102924-25-4  
 CMF C19 H24 N S2 . Br

Relative stereochemistry.



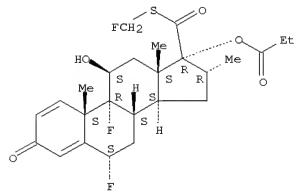
● Br-

CM 2

CRN 80474-14-2  
 CMF C25 H31 F3 O5 S

Absolute stereochemistry.

L4 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

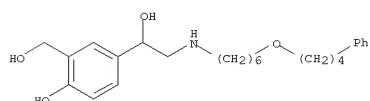


CM 3

CRN 94749-08-3  
 CMF C25 H37 N O4 . C11 H8 O3

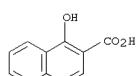
CM 4

CRN 89365-50-4  
 CMF C25 H37 N O4



CM 5

CRN 86-48-6  
 CMF C11 H8 O3

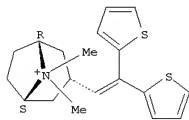


L4 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005-99356 CAPLUS  
 DOCUMENT NUMBER: 142183482  
 TITLE: Muscarinic acetylcholine receptor antagonists  
 INVENTOR(S): Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.  
 PATENT ASSIGNEE(S): Glaxo Group Limited, UK  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200509439	A1	20050203	WO 2004-US22947	20040716
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, AZ, BY, KG, KZ, LE, RO, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG	P: 2004-487981P	P: 2003-487981P		
AU 2004259232	A1	20050203	AU 2004-259232	20040716
CA 2532375	A1	20050203	CA 2004-2532375	20040716
EP 1648460	A1	20060426	EP 2004-778451	20040716
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, CN 1822838	A	20060823	CN 2004-80020649	20040716
BR 2004012716	A	20060926	BR 2004-12716	20040716
JP 2007523877	T	20070823	JP 2006-520377	20040716
IN 2006DN00074	A	20070824	IN 2006-DN74	20060104
MX 2006PA00662	A	20060330	MX 2006-PA662	20060117
US 2006178395	A1	20060810	US 2006-565046	20060117
NO 2006000775	A	20060411	NO 2006-775	20060217
PRIORITY APPLN. INFO.:			US 2003-487981P	P: 2003-487981P
			US 2004-US22947	W: 20040716

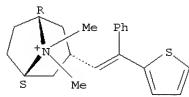
OTHER SOURCE(S): MARPAT 142:183482  
 AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2,2-diphenylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholinereceptor-mediated diseases comprising the above compound is disclosed.  
 IT 102924-25-4 107422-05-9 107894-96-2  
 108042-35-9 834881-95-7  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (muscarinic acetylcholine receptor antagonists)  
 RN 102924-25-4 CAPLUS  
 CN 8-Azoniabicyclo[3.2.1]octane, 3-(2,2-di-2-thienylethenyl)-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

RN 107422-05-9 CAPLUS  
CN 8-Azonabiacyclo[3.2.1]octane, 8,8-dimethyl-3-(2-phenyl-2-(2-thienyl)ethenyl)-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

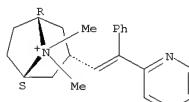
Relative stereochemistry.  
Double bond geometry unknown.



● Br<sup>-</sup>

RN 107894-96-2 CAPLUS  
CN 8-Azonabiacyclo[3.2.1]octane, 8,8-dimethyl-3-(2-phenyl-2-(2-pyridinyl)ethenyl)-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

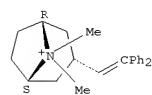
Relative stereochemistry.  
Double bond geometry unknown.



● Br<sup>-</sup>

RN 108042-35-9 CAPLUS

Relative stereochemistry.



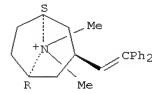
● Br<sup>-</sup>

RN 834881-95-7 CAPLUS  
CN 8-Azonabiacyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8,8-dimethyl-, (3-endo)-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

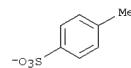
CRN 715649-17-5  
CMF C23 H28 N

Relative stereochemistry.



CM 2

CRN 16722-51-3  
CMF C7 H7 O3 S

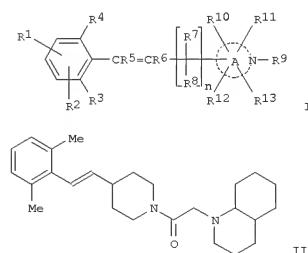


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004-756683 CAPLUS  
DOCUMENT NUMBER: 141:260786  
TITLE: Preparation of nitrogenous heterocyclic derivatives having 2,6-disubstituted styryl as sodium channel inhibitors  
INVENTOR(S): Kikuchi, Kazumi; Oku, Makoto; Fujiyasu, Jiro; Asai, Norio; Watanabe, Toshihiro; Nagakura, Yukinori; Tomiyama, Hiroshi; Somegawa, Motoharu; Tokuzaki, Karue; Iwasa, Yoshinoi  
PATENT ASSIGNEE(S): Yamamoto Pharmaceutical Co. Ltd., Japan; Kotobuki Pharmaceutical Co. Ltd.  
SOURCE: PCT Int. Appl., 64 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004078715	A1	20040916	WO 2004-JP2842	20040305
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JE, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MR, MN, MW, MX, MZ, NA, NI, RW: BW, GH, GN, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004218115	A1	20040916	AU 2004-218115	20040305
CA 2517081	A1	20040916	CA 2004-2517081	20040305
EP 1602645	A1	20051207	EP 2004-717835	20040305
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
BR 2004008136	A	20060301	BR 2004-8136	20040305
CN 1756740	A	20060405	CN 2004-80005921	20040305
MX 2005PA09290	A	20060531	MX 2005-PA9290	20050831
NO 2005004607	A	20051206	NO 2005-4607	20051006
IN 2005KN01977	A	20061110	IN 2005-KN1977	20051006
US 2007099956	A1	20070503	US 2006-548197	20061213
PRIORITY APFLN. INFO.:			JP 2003-61758	A 20030307
			WO 2004-JP2842	W 20040305

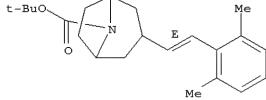
OTHER SOURCE(S): MARPAT 141:260786  
GI



AB Novel nitrogenous heterocyclic derivs. having 2,6-disubstituted styryl or pharmaceutically acceptable salts thereof [I; R1, R2 = H, (un)substituted lower alkyl, cycloalkyl, aryl, acyl, CO<sub>2</sub>H, lower alkoxy carbonyl, CONH<sub>2</sub>, mono- or di(lower alkyl)carbamoyl, HO, lower alkoxy, aryloxy, arlyoxy, NH<sub>2</sub>, mono- or di(lower alkyl)amino, acylamino, halo, NO<sub>2</sub>, heterocyclic, cyano; R3, R4 = (un)substituted lower alkyl, cycloalkyl, acyl, CO<sub>2</sub>H, lower alkoxy carbonyl, CONH<sub>2</sub>, mono- or di(lower alkyl)carbamoyl, HO, lower alkoxy, acyloxy, NH<sub>2</sub>, mono- or di(lower alkyl)amino, acylamino, halo, NO<sub>2</sub>, cyano; R5, R6 = H, lower alkyl, halo; R7 = H, lower alkyl, HO, lower alkoxy, halo; or R7 and R8 together represents oxo; R9 = H, each (un)substituted lower alkyl, cycloalkyl, acyl, lower alkoxy carbonyl, lower alkylsulfonyl, or heterocyclic sulfonyl, lower alkyl-C(:NH), CO<sub>2</sub>H, mono- or di(un)substituted lower alkyl amino; R10-R13 = H or lower alkyl, or two groups of R10-R13 together form oxo] are prepared. Also disclosed is a medicinal composition comprising the nitrogenous heterocyclic derivative I or pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier, especially a medicinal composition for sodium channel inhibitors which has high analgesic activity against neurogenic pains or diabetic neuropathy and is reduced in side effects. Thus, 125 mg 1-benzyl-4-[(E)-2-(2,6-dimethylphenyl)vinyl]-3-methylpiperidine was dissolved in 3 mL 1,2-dichloroethane, treated with 139 mg 1-chloroethyl chloroformate, refluxed for 1 h, cooled, treated with 10 mL MeOH, refluxed for 30 min to give, after workup, from EtOAc-MeOH, 4-[(E)-2-(2,6-dimethylphenyl)vinyl]-3-methylpiperidine monohydrochloride (II). In a sodium channel-inhibitory assay, II and 4-[(E)-2-(2,6-dimethylphenyl)vinyl]piperidine derivative (III) inhibited the veratridine-induced uptake of [<sup>14</sup>C]guanidine in rat brain tissue with IC<sub>50</sub> of 8.7 and 1.1  $\mu$ M, resp., vs. 70  $\mu$ M for mexiletine.

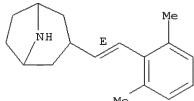
L4 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
IT 756878-55-4P 756878-56-5P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of nitrogenous heterocyclic derivs. having  
2,6-disubstituted  
styryl as sodium channel inhibitors for treatment of neurogenic pains  
or pain associated with diabetic neuropathy)  
RN 756878-55-4 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane-8-carboxylic acid, 3-[(1E)-2-(2,6-dimethylphenyl)ethenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 756878-56-5 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane, 3-[(1E)-2-(2,6-dimethylphenyl)ethenyl]-, hydrochloride (9CI) (CA INDEX NAME)

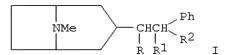
Double bond geometry as shown.



● HCl

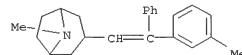
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
ACCESSION NUMBER: 1994:164586 CAPLUS  
DOCUMENT NUMBER: 120:164586  
TITLE: Synthesis of anticholinergics of 3-substituted tropane derivatives  
AUTHOR(S): Wu, Peijin; Ran, Yunzhang; Wen, Guangling; Zhang, Qikai  
CORPORATE SOURCE: Inst. Pharmacol. Toxicol., Acad. Mil. Med. Sci., Beijing, 100850, Peop. Rep. China  
SOURCE: Zhongguo Yaowu Huaxue Zazhi (1993), 3(1), 23-6  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
GI



AB Title compds. I ( R, R1 = H, OH; R2 = 3-MeC6H4, 4-C1C6H4) were prepared starting from Et 3-tropanylacetate. I showed anticholinergic activity in mice.  
IT 153307-16-5P 153307-17-6P 153307-19-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(CA INDEX NAME)

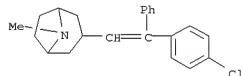
RN 153307-16-5 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane,  
8-methyl-3-[2-(3-methylphenyl)-2-phenylethenyl]-, hydrochloride (9CI) (CA INDEX NAME)



● HCl

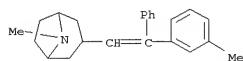
RN 153307-17-6 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane,  
3-[2-(4-chlorophenyl)-2-phenylethenyl]-8-methyl-, hydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

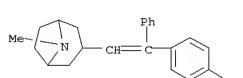


● HCl

RN 153307-19-8 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane,  
8-methyl-3-[2-(3-methylphenyl)-2-phenylethenyl]-, (CA INDEX NAME)



RN 153307-20-1 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane,  
3-[2-(4-chlorophenyl)-2-phenylethenyl]-8-methyl-, (CA INDEX NAME)



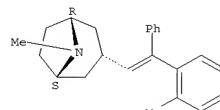
L4 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
ACCESSION NUMBER: 1986:95588 CAPLUS  
DOCUMENT NUMBER: 104:95588  
ORIGINAL REFERENCE NO.: 104:15049a,15052a  
TITLE: The fluorometric ion pair method for the determination of several tertiary amines

AUTHOR(S): Zhang, Liming; Yu, Yongxiang  
CORPORATE SOURCE: Acad. Mil. Med. Sci., Beijing, Peop. Rep. China  
SOURCE: Yaoxue Xuebao (1985), 20(10), 752-8  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese

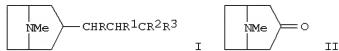
AB Tertiary amines (nonfluorescent) at low concns. (10<sup>-8</sup> to 10<sup>-7</sup>M) are dissolved in pH 2-4 phosphate buffer, mixed with aqueous Na 9,10-dimethoxyanthracene-2-sulfonate, extracted with 1,2-dichloroethane, and the fluorescence is measured at 446 nm (excitation 303 nm). Fluorescence-concentration plots were linear for approx. 5-100 ng/mL of benethiopine, Kemadrin, methylbenethiopine, caramiphen, gangleron, and benztrapine. The limit of detection was 1 ng/mL and the relative standard deviation was <5.

IT 100345-20-8  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, by fluorometry of ion pair with dimethoxyanthracene sulfonate)  
RN 100345-20-8 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane,  
8-methyl-3-[2-(2-methylphenyl)-2-phenylethenyl]-, endo- (9CI) (CA INDEX NAME)

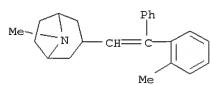
Relative stereochemistry.  
Double bond geometry unknown.



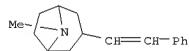
L4 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1985:505186 CAPLUS  
 DOCUMENT NUMBER: 103:105186  
 ORIGINAL REFERENCE NO.: 103:16860h,16861a  
 TITLE: Studies on anticholinergics: synthesis of 3-substituted tropane derivatives  
 AUTHOR(S): Ran, Yunzhang; Wu, Peijin; Wen, Guangling; Zhang, Qikai  
 CORPORATE SOURCE: Inst. Pharmacol. Toxicol., Acad. Milit. Med. Sci., Beijing, Peop. Rep. China  
 SOURCE: Yaoxue Xuebao (1984), 19(5), 361-6  
 CODEN: YHHPAL; ISSN: 0513-4870  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 GI



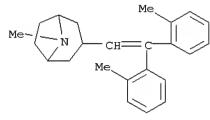
AB Tropanes I (R = H, R1 = OH, R2 = Ph, 2-MeC6H4, 4-MeC6H4, 4-MeOC6H4, 2-pyrrrolyl, cyclopentyl, R3 = H, Ph, 2-MeC6H4, cyclopentyl; R1 = bond, R2,R3 = same as above; R = R1 = H, R2,R3 = same as above) were prepared from 3-tropanone (II). Most of I showed anticholinergic activity in mice. Structure-activity relationships was discussed.  
 IT 88543-21-9P 98042-91-2P 98042-92-3P  
 98042-93-4P 98042-94-5P 98042-95-6P  
 98042-96-7P 98042-97-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, hydrogenation, and anticholinergic activity of)  
 RN 88543-21-9 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 8-methyl-3-[2-(2-methylphenyl)-2-phenylethenyl]- (CA INDEX NAME)



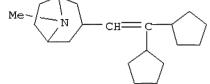
RN 98042-91-2 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 8-methyl-3-(2-phenylethenyl)- (CA INDEX NAME)



L4 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

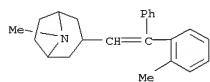


RN 98042-97-8 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-dicyclopentylethenyl)-8-methyl-, hydrochloride (9CI) (CA INDEX NAME)

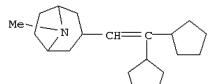


● HCl

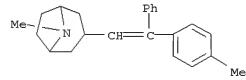
IT 88543-21-9P 98043-09-5P 98988-11-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation, salt formation, and anticholinergic activity of)  
 RN 88543-21-9 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane,  
 8-methyl-3-[2-(2-methylphenyl)-2-phenylethenyl]- (CA INDEX NAME)



RN 98043-09-5 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-dicyclopentylethenyl)-8-methyl- (CA INDEX NAME)

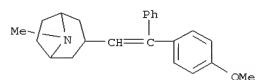


L4 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 RN 98042-92-3 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2-(4-methoxyphenyl)-2-phenylethenyl]-8-methyl- (CA INDEX NAME)

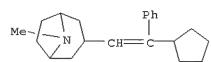


● HCl

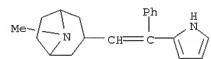
RN 98042-93-4 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2-(4-methoxyphenyl)-2-phenylethenyl]-8-methyl- (CA INDEX NAME)



RN 98042-94-5 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2-cyclopentyl-2-phenylethenyl)-8-methyl- (CA INDEX NAME)



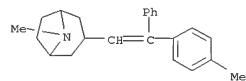
RN 98042-95-6 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane,  
 8-methyl-3-(2-phenyl-2-(1H-pyrrol-2-yl)ethenyl)- (CA INDEX NAME)



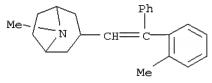
RN 98042-96-7 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-[2,2-bis(2-methylphenyl)ethenyl]-8-methyl- (CA INDEX NAME)

L4 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 98988-11-5 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane,  
 8-methyl-3-[2-(4-methylphenyl)-2-phenylethenyl]- (CA INDEX NAME)



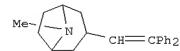
L4 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1984:56732 CAPLUS  
 DOCUMENT NUMBER: 100:56732  
 ORIGINAL REFERENCE NO.: 100:8599a,8602a  
 TITLE: Studies on percent distribution of tertiary amine drugs  
 AUTHOR(S): Yu, Yongxiang; Yu, Yun Hsiang  
 CORPORATE SOURCE: Acad. Mil. Med. Sci., Beijing, Peop. Rep. China  
 SOURCE: Yaoxue Xuebao (1983), 18(10), 766-74  
 CODEN: YHHPAL; ISSN: 0513-4870  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 AB The partition of tertiary amine drugs between various organic solvent systems and H<sub>2</sub>O in the presence of extractants (salts) was studied. The percent distribution (PD) of the tertiary amines increased with increasing dielectric constants of solvent mixture. When sulfate substituent extractants were added, the PD increased with increasing lipophilic properties of the substituted group. Addition of different inorg. salts did not change the pattern of PD curves, nor the pH value of the rising point of these curves, but their height was affected. The effect of salts on the PD of tertiary amines was in the order: ClO<sub>4</sub>->Br->NO<sub>3</sub>->Cl->SO<sub>4</sub>2-; monobasic acid salt>dibasic acid salt>tribasic acid salt. When monobasic acid salts were added, the PD decreased with decreasing mol. wts. of these acid radicals. Addition of organic acid salts to the water phase caused the PD to increase and the pH value at which the PD reached 100% to decrease. Increasing the hydrophilic group or electroneg. group in the mol. of either the extractant or tertiary amines caused the PD to become smaller, and increasing lipophilic group or the number of C atoms caused it to become larger. The pKa of tertiary amines played a role only at such a stage (weakly acidic aqueous phase) that its ionic form was changing to the mol. form. However, it was still affected by lipophilic groups. The effect of the aqueous phase on PD at different acidic and basic stages and the relationship between different cases of solvent extraction are discussed.  
 IT 88543-21-9 88543-22-0  
 RL: PRP (Properties)  
 (partition of, between organic solvents and water, salts effect on)  
 RN 88543-21-9 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane,  
 8-methyl-3-[2-(2-methylphenyl)-2-phenylethenyl]-  
 (CA INDEX NAME)



RN 88543-22-0 CAPLUS

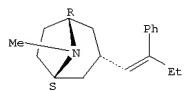
L4 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1963:27160 CAPLUS  
 DOCUMENT NUMBER: 58:27160  
 ORIGINAL REFERENCE NO.: 58:4510b-h  
 TITLE: 3-Substituted tropane derivatives. III. 3-Substituted tropane, carbolins, alkalenes, and alkanes  
 AUTHOR(S): Zirkle, Charles L.; Anderson, Elvin L.; Craig, Paul N.; Gerns, Fred R.; Indik, Zena K.; Pavloff, Alex M.; Smith, Kline & French Labs., Philadelphia, PA  
 SOURCE: Journal of Medicinal & Pharmaceutical Chemistry (1962), 5, 341-56  
 CODEN: JMPCAS; ISSN: 0095-9065  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 OTHER SOURCE(S): CASREACT 58:27160  
 GI For diagram(s), see printed CA issue.  
 AB cf. CA 57, 3389b. For testing as cholinolytic agents, a series of 3-substituted tropane derivs. (Ia) were prepared by the following sequence:  
 (X = 3a-, or 3β-tropinyl) X(CH<sub>2</sub>)nCO<sub>2</sub>Me → X(CH<sub>2</sub>)nCOR (I)  
 → X(CH<sub>2</sub>)nC(OH)RR' (II) → X(CR)(III), XCH<sub>2</sub>CR' (IV), or  
 XCH<sub>2</sub>CH<sub>2</sub>CR' (V) → X(CH<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>CR' (VI) using the procedures followed by Adamson for open chain analogs (Adamson, et al., CA 45, 8462F). Compds. prepared were (compound number, tropinyl group configuration, n, R, R', % yield, m.p., b.p./pressure, n<sub>D</sub><sup>25</sup>, salts prepared with m.p. of each, and relative activity (atropine = 1) given): I, α, O, 2-thienyl, --, 4,4-, --, 142-3°/4.4, --, picrate 259°, --; I, α, 1, Ph, --, 75, --, 140-3°/0.2, --, HCl 140-3°, --; I, α, 1, cyclohexyl, --, 35, --, 142-4°/0.8, --, picrate 165-8°, MeBr 297-9°, --; I, α, 1, 2-cyclohexylethyl, --, 74, --, 157-6°/0.7, 1.5010, picrate 148-50°, --; I, α, 2, Et, --, 77, --, 105-9°/0.35, 1.4870, picrate 123.0-4.5°, --; II, β, O, Me, 84, --, 116-19°/4, --, picrate 167.5-9.0°, MeI 199-202°, --; II, α, O, 2-thienyl, 2-thienyl, 8.0, 157.5-9.0°, --, --, II, α, O, Ph, Ph, 47, 185.5-6.0°, --, --, HCl 290°, citrate 112-18% picrate 214.0-15.5°, MeBr 309-10°, citrate 0.001, MeBr salt 0.1; II, β, O, Ph, Ph, 86, 182-4°, --, HCl 325°, picrate 230-1°, HCl salt 0.01; II, α, 1, Ph, Ph, 76, 147-8°, --, --, HCl 235°, HBr 230°, MeBr 282°, HCl salt 1, MeBr salt 0.1-1.0; II, α, 1, Ph, Ph, --, 178-9°, --, --, HCl 253.5°, HCl salt 0.001; II, α, 1, cyclohexyl, Ph, 90, 139.0-40.5°, --, --, HCl 254-5°, MeBr 262°, HCl salt 0.1; II, α, 1, 2-cyclohexylethyl, Ph, above 66, 104-6°, --, HCl 215-16°, citrate 134-6°, MeBr 263-5°, HCl salt 0.01; II, α, 1, Ph, Et, 12, --, --, HCl 237°, HCl salt 0.01-0.10; II, α, 1, 2-pyridyl, Ph, 64, 117.5-18.5°, --, --, HCl 194-6°, dipicrate 191-2°, MeBr 268°, HCl salt 0.01; II, α, 1, Ph, 2-thienyl, 73, 137.5-9.0°, --, --, maleate 145-6°, MeBr 256°, maleate 1; II, α, 1, 2-thienyl, 2-thienyl, 69, 138-40°, --, --, HOAc 189-90°, MeBr 245.5°, HOAc salt 1; II, α, 2, Ph, Ph, 92, 142-3°, --, --, HCl 249-50°, MeBr 299°, HCl salt 0.01, MeBr salt 0.1; III, --, --, Ph, Ph, --, --, HCl 275-8°, picrate 237-8°, MeBr 281-5°, HCl salt 0.01, MeBr salt 0.1-1.0; III, --, --, 2-thienyl, 2-thienyl, 76, --, --, HCl 224-5°, --; IV, α, --, Ph, Ph, 100, 111-12°, --, --, HCl 217-18°, picrate 186-8°, MeBr 286° HCl salt 1-10, MeBr salt 0.1-1.0; IV, α, --, cyclohexyl, Ph, 95, --, --, HCl 195-6°, HCl

L4 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8-methyl- (CA INDEX NAME)



L4 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 CN 222.5-4.0°, MeBr 250-5° HCl salt 1; IV, α, --, Ph, Et, --, --, HCl 214-15°, --; IV, α, --, Ph, 2-pyridyl, 78, 97.5-9.5, --, -- tartrate 165-7°, picrate 204-6°, MeBr 227-8°, --; IV, α, --, Ph, 2-thienyl, 96, 65-70, --, --, HCl 194-200° tartrate 174-5° picrate 209-10°, MeBr 258-9°, tartrate 0.1-1.0°, IV, α, --, 2-thienyl, 2-thienyl, 76, --, --, HCl 230-2°, picrate 190-2°, MeBr 252-3°, HCl salt 1; V, α, --, Ph, Ph, --, --, citrate 174°, MeBr 280°, citrate 0.001, MeBr salt 0.01; VI, α, O, Me, Me, --, --, 109-11°/29, 1.4739, HCl 194-68 MeI 224-6°, --; VI, α, O, Ph, Ph, --, 70-9°, --, HCl above 310°, MeBr 277-8°, HCl 0.01, MeBr salt 0.1; VI, α, 1, Ph, Ph, --, --, --, HCl 244-5°, MeBr 257-8°, HCl salt 1-10, MeBr 1; VI, α, O, cyclohexyl, Ph, --, --, --, HCl 167.0-8.5°, citrate 153-6°, picrate 140-1°, MeBr 259-60°, citrate 0.1-1°, VI, α, 1, 2-cyclohexylethyl, Ph, Ph, --, --, HCl 198-200°, --; VI, α, 1, Ph, 2-pyridyl, --, --, --, tartrate 78-80° picrate 201-3°, --, --, and VI, α, 2, Ph, Ph, Ph, --, --, --, citrate 170°, MeBr 277°, citrate 0.001-0.01, MeBr salt 0.01.  
 IT 99673-47-9P, Tropane, 3a-(β-ethylstyryl)-, hydrochloride 101058-02-OP, Tropane, 3a-(2,2-diphenylvinyl)- 101058-03-1F, Tropane, 3a-(2,2-diphenylvinyl)-, picrate 102924-25-4P, 8-Azabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8-methylstyryl)-, bromide 104763-78-2P, Tropane, 3a-(β-2-thienylstyryl)-, hydrochloride 106172-58-1P, Tropane, 3a-(2,2-diphenylvinyl)-, hydrochloride 106300-51-OP, Tropane, 3a-(2,2-diphenylvinyl)-, hydrochloride 106801-38-1P, 3a-(β-Cyclohexylstyryl)-, 8-methyltroponium bromide 106843-61-2P, Tropane, 3a-(2,2-di-2-thienylvinyl)-, picrate 107063-12-7P, Tropane, 3a-(β-2-pyridylstyryl)-, picrate 107063-70-7P, Tropane, 3a-(β-2-thienylstyryl)-, picrate 107157-12-0P, Tropane, 3a-(β-2-thienylstyryl)-, tartrate 107242-35-3P, Tropane, 3a-(β-2-pyridylstyryl)-, tartrate 107422-05-9P, 8-Azabicyclo[3.2.1]octane, 8,8-dimethyl-3-[2-phenyl-2-(2-thienyl)ethenyl]-, bromide 107894-96-2P, 8-Azabicyclo[3.2.1]octane, 8,8-dimethyl-3-[2-phenyl-2-(2-pyridyl)ethenyl]-, bromide 108042-35-9P, 8-Azabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8,8-dimethyl-, bromide  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 99673-47-9 CAPLUS  
 CN Tropane, 3a-(β-ethylstyryl)-, hydrochloride (7CI) (CA INDEX NAME)

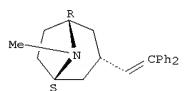
Relative stereochemistry.  
 Double bond geometry unknown.



● HCl

RN 101058-02-0 CAPLUS  
 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8-methyl-, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.

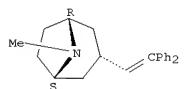


RN 101058-03-1 CAPLUS  
 CN Tropane, 3a-(2,2-diphenylvinyl)-, picrate (7CI) (CA INDEX NAME)

CM 1

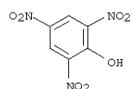
CRN 101058-02-0  
 CMF C22 H25 N

Relative stereochemistry.



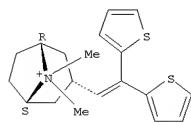
CM 2

CRN 88-89-1  
 CMF C6 H3 N3 O7

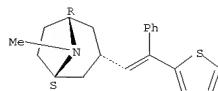


RN 10294-25-4 CAPLUS  
 CN 8-Azoniarbocyclo[3.2.1]octane, 3-(2,2-di-2-thienylethenyl)-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

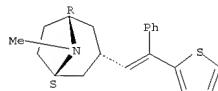
Relative stereochemistry.

● Br<sup>-</sup>

RN 104763-78-2 CAPLUS  
 CN Tropane, 3a-(β-2-thienylstyryl)- (7CI) (CA INDEX NAME)

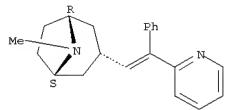
Relative stereochemistry.  
Double bond geometry unknown.

RN 104781-44-4 CAPLUS  
 CN Tropane, 3a-(β-2-thienylstyryl)-, hydrochloride (7CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.

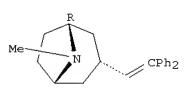
● HCl

RN 106172-58-1 CAPLUS  
 CN Tropane, 3a-(β-2-pyridylstyryl)- (7CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.

RN 106194-08-5 CAPLUS  
 CN Tropane, 3a-(2,2-diphenylvinyl)-, hydrochloride (7CI) (CA INDEX NAME)

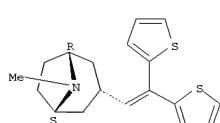
Relative stereochemistry.



● HCl

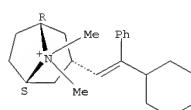
RN 106300-51-0 CAPLUS  
 CN Tropane, 3a-(2,2-di-2-thienylvinyl)-, hydrochloride (7CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

RN 106801-38-1 CAPLUS  
 CN 3a-(β-Cyclohexylstyryl)-8-methyltroponium bromide (7CI) (CA INDEX NAME)

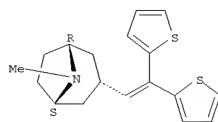
Relative stereochemistry.  
Double bond geometry unknown.● Br<sup>-</sup>

RN 106843-61-2 CAPLUS  
 CN Tropane, 3a-(2,2-di-2-thienylvinyl)-, picrate (7CI) (CA INDEX NAME)

CM 1

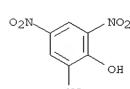
CRN 106843-60-1  
 CMF C18 H21 N S2

Relative stereochemistry.



CM 2

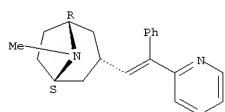
CRN 88-89-1  
 CMF C6 H3 N3 O7



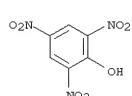
RN 107063-12-7 CAPLUS  
 CN Tropane, 3a-(β-2-pyridylstyryl)-, picrate (7CI) (CA INDEX NAME)

CM 1

CRN 106172-58-1  
 CMF C21 H24 N2



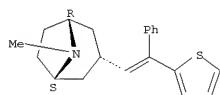
CM 2  
 CRN 88-89-1  
 CMF C6 H3 N3 O7



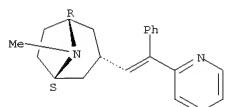
RN 107063-70-7 CAPLUS  
 CN Tropane, 3a-( $\beta$ -2-thienylstyryl)-, picrate (7CI) (CA INDEX NAME)

CM 1  
 CRN 104763-78-2  
 CMF C20 H23 N S

Relative stereochemistry.  
 Double bond geometry unknown.



CM 2  
 CRN 88-89-1  
 CMF C6 H3 N3 O7

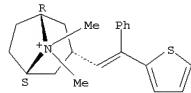


CM 2  
 CRN 87-69-4  
 CMF C4 H6 O6

Absolute stereochemistry.

RN 107422-05-9 CAPLUS  
 CN 8-Azoniabicyclo[3.2.1]octane, 8,8-dimethyl-3-[2-phenyl-2-(2-thienyl)ethenyl]-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

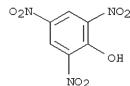
Relative stereochemistry.  
 Double bond geometry unknown.



● Br<sup>-</sup>

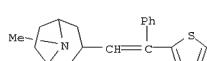
RN 107894-96-2 CAPLUS  
 CN 8-Azoniabicyclo[3.2.1]octane, 8,8-dimethyl-3-[2-phenyl-2-(2-pyridinyl)ethenyl]-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry unknown.



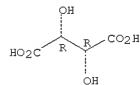
RN 107157-12-0 CAPLUS  
 CN Tropane, 3a-( $\beta$ -2-thienylstyryl)-, tartrate (7CI) (CA INDEX NAME)

CM 1  
 CRN 102157-42-6  
 CMF C20 H23 N S



CM 2  
 CRN 87-69-4  
 CMF C4 H6 O6

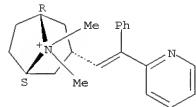
Absolute stereochemistry.



RN 107242-35-3 CAPLUS  
 CN Tropane, 3a-( $\beta$ -2-pyridylstyryl)-, tartrate (7CI) (CA INDEX NAME)

CM 1  
 CRN 106172-58-1  
 CMF C21 H24 N2

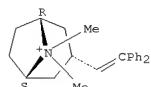
Relative stereochemistry.  
 Double bond geometry unknown.



● Br<sup>-</sup>

RN 108042-35-9 CAPLUS  
 CN 8-Azoniabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Br<sup>-</sup>

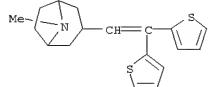
RN 107894-96-2 CAPLUS  
 CN 8-Azoniabicyclo[3.2.1]octane, 8,8-dimethyl-3-[2-phenyl-2-(2-pyridinyl)ethenyl]-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry unknown.

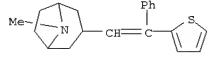
L4 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1958:93024 CAPLUS  
 DOCUMENT NUMBER: 52:93024  
 ORIGINAL REFERENCE NO.: 52:16402b-f  
 TITLE: 8-Alkynyltropane derivatives  
 INVENTOR(S): Zirkle, Charles L.  
 PATENT ASSIGNEE(S): Smith, Kline & French Laboratories  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2800482		19570723	US 1955-519650	19550710
AB			3-Benzhydrylidene tropone picrate m. 237-8° (aqueous alc.); methobromide, m. 281-5° (iso-PrOH-Me <sub>2</sub> CO); etho(ethyl sulfate), white solid. Di(2-thienyl)-3-tropanylicarbinol (0.5 g.) in CHCl <sub>3</sub> treated with dry HCl until strongly acid gave 2-[di(2-thienyl)methylenetropone]-HCl, m. 224-5° (alc. Et <sub>2</sub> O). 1,1-Di(2-thienyl)-3-tropaneethanol (1 g.), 2 g. (CO <sub>2</sub> H) <sub>2</sub> , and 3 ml. H <sub>2</sub> O refluxed 2 hrs. gave 1,1-di(2-thienyl)-2-(3-tropanylyl)ethylene, m. 74-6° (lignoine); picrate, m. 190-2° (aqueous Me <sub>2</sub> CO); HCl salt, m. 230-2° (alc. Et <sub>2</sub> O); methobromide, m. 252-3°. 1,1-Diphenyl-2-(3-tropanylyl)ethylene methobromide, m. 286° (alc.); maleate, metho-p-toluenesulfonate, white solid. 1-Phenyl-1-(2-thienyl)-3-tropaneethanol (9.7 g.), 19.4 g. (CO <sub>2</sub> H) <sub>2</sub> , and 29 ml. H <sub>2</sub> O refluxed 2 hrs. and the mixture made alkaline gave 1-phenyl-1-(2-thienyl)-2-(3-tropanylyl)ethylene, m. 69-72°; picrate, m. 209-10°; tartrate, m. 174-5° (alc. Et <sub>2</sub> O); methobromide, m. 258-9° (alc. Et <sub>2</sub> O). 1-Phenyl-1-(2-pyridyl)-2-(3-tropanylyl)ethylene methobromide, m. 228-30° (alc. Et <sub>2</sub> O); tartrate, m. 165-7° (alc. Et <sub>2</sub> O). 1-(2-Cyclohexylethyl)-1-phenyl-3-tropaneethanol (1 g.) in 10 ml. AcOH and 3 ml. 37% HCl refluxed 0.5 hr. gave the dehydration product, $\lambda$ 235 nm, $\epsilon$ 3.58. 1-Cyclohexyl-1-phenyl-2-(3-tropanylyl)ethylene-H <sub>4</sub> , m. 222.5-4.0°; methobromide, m. 250-3° (H <sub>2</sub> O); butriodide, white solid. 1,1-Diphenyl-3-tropaneethanol (15 g.) in 50 ml. 37% HCl 1.5 hrs. at 100° gave 1,1-diphenyl-1-(3-tropane-1-propene, m. 59-60°, b.p. 170-3°; citrate, m. 174°. 1-(2-Pyridyl)-1-p-tolyl-4-(3-tropanylyl)-1-butanol (0.5 g.) and 2 ml. 85% H <sub>2</sub> SO <sub>4</sub> heated 15 min. at 155° gave 1-(2-pyridyl)-1-p-tolyl-4-(3-tropanylyl)-1-butene. A similar dehydration of 1-cyclopentyl-1-phenyl-3-tropaneethanol with HCl gave the corresponding butene as the HCl salt; neutralization with NH <sub>4</sub> OH gave the free base as a yellow oil.	
IT		101719-89-5, Tropane, 3-(2,2-di-2-thienylvinyl)-		
		102157-42-6, Tropane, 3-β-2-thienylstyryl-		
		110147-39-2, Tropane, 3-(β-2-pyridylstyryl)-		(and derivs.)
RN		101719-89-5 CAPLUS		
CN		Tropane, 3-(2,2-di-2-thienylvinyl)- (6CI) (CA INDEX NAME)		

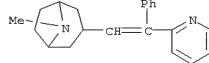
L4 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



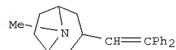
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 CN Tropane, 3-β-2-thienylstyryl- (6CI) (CA INDEX NAME)



RN 110147-39-2 CAPLUS  
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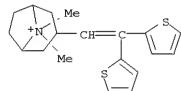


IT 88543-22-0P, Tropane, 3-(2,2-diphenylvinyl)- 110377-10-1P , 3-(2,2-Di-2-thienylvinyl)-8-methyltropanium bromide 114402-20-9P , Tropane, 3-(β-cyclohexylstyryl)-, hydriodide 119040-93-6P , 3-(β-Cyclohexylstyryl)-8-methyltropanium bromide 124111-32-6P, 8-Butyl-3-(β-cyclohexylstyryl)tropanium iodide RL: PREP (Preparation)  
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 CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8-methyl- (CA INDEX NAME)



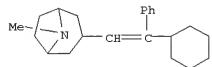
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L4 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



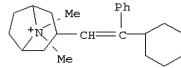
● Br<sup>-</sup>

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● HI

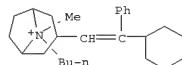
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 CN 3-(β-Cyclohexylstyryl)-8-methyltropanium bromide (6CI) (CA INDEX NAME)



● Br<sup>-</sup>

RN 124111-32-6 CAPLUS  
 CN 8-Butyl-3-(β-cyclohexylstyryl)tropanium iodide (6CI) (CA INDEX NAME)

L4 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



● I<sup>-</sup>

RN 124111-32-6 CAPLUS  
 CN 8-Butyl-3-(β-cyclohexylstyryl)tropanium iodide (6CI) (CA INDEX NAME)

L4 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1958:93020 CAPLUS  
 DOCUMENT NUMBER: 52:93020  
 ORIGINAL REFERENCE NO.: 52:16399b-i,16400a-i,16401a  
 TITLE: 8-Alkylnortropane derivatives  
 INVENTOR(S): Zirkle, Charles L.  
 PATENT ASSIGNEE(S): Smith, Kline & French Laboratories  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2800478		19570723	US 1955-519646	19550701
AB	Some new physiologically active 3-substituted-8-alkylnortropes, the nontoxic organic and inorg. salts, and the quaternary ammonium salts are described. Me-3-(3-hydroxytropane)carboxylate (10 g.) in 50 ml. Ac2O heated 4 hrs. at 100°, the excess Ac2O and AcOH removed in vacuo, the residue poured into H2O, extracted with Et2O, and the Et2O evaporated gave Me-3-(3-acetoxytropane)-carboxylate (I), m. 66-75, b15 162-5°. I (29 g.) added dropwise during 7 min. to a vertical tube heated to 420° and filled with pieces of Pyrex tubing, the apparatus swept with N <sub>2</sub> , the product dissolved in dilute HCl, extracted with Et2O, the aqueous acid solution saturated with K2CO <sub>3</sub> , and the product separated gave Me-3-(2-tropane)carboxylate (II), b15 131-4°, n25D 1.4998. II (13 g.) in 100 ml. MeOH hydrogenated over 5 g. Raney Ni at 50 lb./sq. in. at room temperature and the mixture distilled gave Me-3-tropaneacarboxylate (III), b18 128-32°, n25D 1.4819. III (10.1 g.) in 100 ml. Et2O stirred 1.5 hrs. at room temperature with a solution of PhLi (from 34.5 g. PhBr and 3.5 g. Li) in 100 ml. Et2O, the mixture added to 150 ml. H2O, and the solid collected and purified gave diphenyl-3-tropaneacarboxylate (IV), m. 185.5-6.0° (EtOAc). IV (5.6 g.) in 20 ml. AcOH and 25 ml. dilute HCl refluxed 10 min. and evaporated to dryness gave 3-benzhydrylideneacetylacetone-HCl, m. 275-8° (alc.-Et2O); free base (V), a colorless oil. V (4 g.) in alc. hydrogenated over Raney Ni at 400 lb./sq. in. at 60° and the product chromatographed on Al2O <sub>3</sub> gave 3-benzhydryl tropane (VI), m. 70-2°. VI (1 g.) gave the HCl salt, unmelting below 310°; MeBr salt, m. 277-9°; etho(ethyl sulfate), white solid. Troponine (13.9 g.), 11.3 g. NCCH <sub>2</sub> CO <sub>2</sub> Et, 1.6 g. NH4OAc, 7.3 g. AcOH, 20 ml. alc., and 0.6 g. Pd-C shaken under H at 50° and 60 lb./sq. in. gave Et- $\alpha$ -cyano-3-tropaneacetate (VII), b0.3 116-18°, n24D 1.4942. VII (8 g.) in 30 ml. 37% HCl refluxed 13 hrs. and the crude 3-tropaneacetic acid-HCl esterified by leaving 3 days at room temperature in 50 ml. alc. with dry HCl gave Et-3-tropaneacetate (VIII), b2 104-5°, n25D 1.4774. VIII (42 g.) in 100 ml. Et2O similarly treated with PhLi gave 1,1-diphenyl-3-tropaneethanol (IX), m. 146.5-7.5° (EtOAc). IX (14.6 g.) in 29 ml. 37% HCl and 100 ml. AcOH refluxed 0.5 hr. gave 1,1-diphenyl-2-(3-tropanyl)ethylene (X), as the HCl salt, m. 217-18° (alc.-Et2O); free base, m. 109.5-10.0° (Me2CO). X (10 g.) in alc. hydrogenated over Raney Ni at 500 lb./sq. in. and 60° gave 1,1-diphenyl-2-(3-tropanyl)ethane, colorless oil; HCl salt, m. 244-5°; methobromide, m. 257-8° (alc.-Et2O);			

L4 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 0° gave 1-(*p*-anisyl)-1-phenyl-3-(*N*-isopropylnortropane)ethanol (XIV), white solid. Dehydration of XIV with oxalic acid and H2O gave the ethylene, which when hydrogenated as described above gave 1-p-anisyl-1-phenyl-2-(3-(*N*-isopropylnortropane)l)ethane, metobromide salt. VIII (164 g.) in 50 ml. Et2O refluxed 3 hrs. with 30 g. LiAlH<sub>4</sub> in 2 l. Et2O gave 3-tropaneethanol (XXV), m. 63-4° (*C*6H<sub>6</sub>-ligroine). XXV (10 g.) in 50 ml. CHCl<sub>3</sub> treated with 14.3 g. SOCl<sub>2</sub>, refluxed 45 min., and isolation gave 1-chloro-2-(3-tropanyl)ethane-HCl, m. 167-9° (alc.-Et2O); free base, b0.9 81°. The base (47 g.) and 0.1 g. NaI refluxed 17 hrs. with 49 g. KCN in 175 ml. alc. and 75 ml. H2O, NaOH added to the residual mixt., and the product isolated gave 3-tropanepropionitrile (XXVI), b0.3 114-16°, n25D 1.4958. XXVI (25 g.) in 100 ml. 37% HCl refluxed several hrs., and evapd., the residue dissolved in 300 ml. alc., 5 ml. concd. H2SO<sub>4</sub> added, and the residue treated with 40% NaOH gave Et-3-tropaneprionopionate (XXVII), b0.4 97-100°, n25D 1.4770. Similarly XXVII treated with PhLi gave 1,1-diphenyl-3-tropaneprionopanone (XXVIII), m. 141-2.5°. Dehydration of XXVII with concd. HCl and 40% NaOH added gave 1,1-diphenyl-3-(3-tropanyl)-1-propene (XXIX), b0.4 170-3°, m. 59-60°. XXIX (4.7 g.) hydrogenated over 5 g. Raney Ni gave 1,1-diphenyl-3-(3-tropanyl)propane as an oil; citrate, m. 170°; metobromide, m. 277°. XXVII reduced with 3 g. LiAlH<sub>4</sub> gave 3-tropaneprionopanone (XXX), b2 128-31°. XXX (7.7 g.) treated with 10 g. SOCl<sub>2</sub> gave the HCl salt, which treated with K2CO<sub>3</sub> liberated 1-chloro-3-(3-tropanyl)propane (XXXI), b1 100-2°. XXXI (5 g.) refluxed 18 hrs. with 0.1 g. NaI, 5 g. KCN, 18 ml. alc., and 8 ml. H2O gave 3-tropanebutyronitrile (XXXII), b0.3 132-5°. XXXII (3 g.) refluxed several hrs. with concd. HCl and the product treated with 40% NaOH gave Et-3-tropaneprionopanone (XXXIII), b0.5 115-19°. XXXIII (2.3 g.) similarly treated with *p*-tolyl magnesium bromide gave *p*-tolyl  $\gamma$ -(3-tropanyl)propyl ketone (XXXIV), b0.2 188-92°. XXXIV (1.5 g.) in 15 ml. Et2O treated with BuLi and 2-bromopyridine in Et2O gave 1-(2-pyridyl)-1-*p*-tolyl-3-tropanebutanone (XXXV), cryst. solid. XXXV (0.5 g.) dehydrated with 85% H2SO<sub>4</sub>, and the product reduced as described above gave 1-(2-pyridyl)-1-*p*-tolyl-4-(3-tropanyl)butane. II (9.2 g.) with MeLi gave dimethyl-3-tropaneacarbinol, which was dehydrated by refluxing with AcOH and concd. HCl, and the product hydrogenated over Raney Ni to give 3-isopropyltropane as an oil. XXII (11.3 g.) treated with C6H3Li gave 1,1-dimethyl-3-(*N*-isopropylnortropane)ethanol (XXXVI), white solid. XXXVI (8 g.) refluxed 45 min. with AcOH and HCl gave an unsatd. product as the HCl salt which was hydrogenated over Raney Ni to 2-hexyl-1-[3-(*N*-isopropylnortropane)]octane as an oil. XXXVII (14.3 g.) similarly treated with cyclopentylmagnesium bromide gave cyclopentyl 3-(3-tropanyl)propyl ketone (XXXVII), b0.9 152-6°. XXXVII (3.5 g.) dehydrated and the product reduced over Raney Ni gave 1-cyclopentyl-1-phenyl-4-(3-tropanyl)butane, a colorless oil.

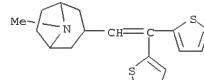
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 110377-10-1 111979-88-5 114402-20-9  
 114723-81-8 118801-08-4 119040-93-6  
 124111-32-6 124138-73-4

(Derived from data in the 6th Collective Formula Index (1957-1961))

RN 101719-88-4 CAPLUS  
 CN Tropane, 3-(2,2-di-2-thienylvinyl)-, hydrochloride (6CI) (CA INDEX NAME)

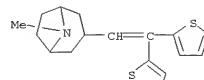
L4 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 metho-*p*-toluenesulfonate, white solid; maleate, obtained by treating with maleic acid in alc. VIII in 37% HCl refluxed several hrs. gave 3-tropaneacetic acid-HCl (XI), m. 172-4° (MeOH-Et2O). XI (11 g.) similarly treated with PhLi followed by passage of HCl gave the HCl salt which when washed was reconvereted to phenyl 3-tropanylmethyl ketone (XII), b0.2 138-41°. BuLi (from 3.7 g. BuCl and 0.7 g. Li) in 25 ml. Et2O treated slowly at -45° with 5.5 g. 2-bromopyridine in 10 ml. Et2O, the mixt. stirred 10 min., and 2.5 g. XII in 30 ml. Et2O added slowly, the mixt. stirred 15 min. at -15°, 50 ml. H2O added, the mixt. stirred a further 15 min., a solid collected, the solid stirred with CHCl<sub>3</sub> and H2O, and the CHCl<sub>3</sub> layer removed, combined with the Et2O layer and evapd. gave 1-phenyl-1-(2-pyridyl)-3-tropaneethanol (XIII), m. 117-18.5° (EtOAc). XIII (1 g.) and 2 ml. 85% H2SO<sub>4</sub> heated 15 min. at 155° and the soln. made basic gave 1-phenyl-1-(2-pyridyl)-2-(3-tropanyl)ethylethane (XIV), m. 97.5-9.5° (Me2CO). XIV (0.2 g.), 5 g. cyclohexene, and 0.3 g. 20% Pd-C refluxed 48 hrs. gave 1-phenyl-1-(2-pyridyl)-2-(3-tropanyl)ethane (XV) as a thick oil; picrate, m. 201-3° (aq. Me2CO). XV also forms the tartrate, m. 78-80° (alc.-Et2O). XV (12.2 g.) in 50 ml. Et2O added slowly to EtMgBr soln. (from 7.3 g. Mg) at 0°, the mixt. stirred 1.5 hrs. at room temp., then refluxed 1.5 hrs., decompd. with ice and 21 g. NH4Cl in 50 ml. H2O, the Et2O layer removed, and the aq. phase extd. with CHCl<sub>3</sub> gave 1-ethyl-1-phenyl-3-tropaneethanol (XVI), m. 119-20°. XVI (10.4 g.) was dehydrated by heating 40 min. at 100° with 3 ml. concd. HCl to the ethylene, m. 170-200°. The ethylene hydrogenated in alc. over Raney Ni at 60° and 500 lb./sq. in. gave 1-ethyl-1-phenyl-2-(3-tropanyl)ethane (XVII), an oil, which formed an HCl salt, VIII (15 g.). Similarly treated with 2-cyclohexylethylmagnesium bromide gave 2-cyclohexylethyl-3-tropanylmethyl ketone (XVIII), b0.7 157-64°, n25D 1.5010. XVIII (7.7 g.) in 20 ml. Et2O similarly treated with PhLi (from 9.5 g. PhBr) in Et2O at 0° gave 1-(2-cyclohexylethyl)-1-phenyl-3-tropaneethanol (XIX), m. 104-6° (EtOAc). XIX (0.5 g.), 1 ml. H<sub>2</sub>, 3 ml. AcOH, and 0.13 g. red P refluxed 3.5 hrs., the soln. filtered, the filtrate dild. with H2O, the crude HI salt seed, as an oil and crystd. gave 1-(2-cyclohexylethyl)-1-phenyl-2-(3-tropanyl)ethane-HI, m. 175° (alc.-Et2O). The free base was a colorless oil; HCl salt, m. 198-200°. Similarly, 25 g. VIII reacted with cyclohexylmagnesium bromide to give cyclohexyl 3-tropanylmethyl ketone (XX), b0.9-1.1 142-53°, crystg. to a white solid on standing. XX (10 g.) similarly treated with PhLi gave 1-cyclohexyl-1-phenyl-3-tropaneethanol (XXI), m. 139-40.5° (EtOAc). XXI (1 g.) refluxed 0.5 hr. with AcOH and concd. HCl gave the ethylene salt, m. 195-6°. Hydrolysis gave the free base as an oil. The free base (4.4 g.) hydrogenated over Raney Ni at 500 lb./sq. in. and 60° gave 1-cyclohexyl-1-phenyl-2-(3-tropanyl)ethane, colorless oil; HCl salt, m. 167-8.5°; citrate, m. 153-5°; butiiodide, white solid. N-Isopropylnortropane (16.7 g.), 11.3 g. NCCH<sub>2</sub>CO<sub>2</sub>Et, 1.6 g. NH4OAc, 7.3 g. AcOH, 20 ml. alc., and 0.6 g. Pd-C shaken with H at 60 lb./sq. in. and 60°, the residue refluxed 12 hrs. with concd. HCl gave crude 3-(*N*-isopropylnortropane)-acetic acid-HCl which was esterified with anhyd. HCl and HCl 3 days at room temp. gave Me-3-(*N*-isopropylnortropane)acetate (XXII), b0.3 124-7°. XXII (11.3 g.) similarly treated with *p*-anisylmagnesium bromide gave *p*-anisyl 3-(*N*-isopropylnortropanyl)methyl ketone (XXIII), b0.2 160-4° and crystd. as a white solid. XXIII (7.5 g.) similarly treated with PhLi at

L4 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

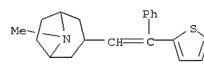


● HCl

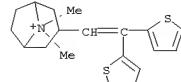
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RN 102157-42-6 CAPLUS  
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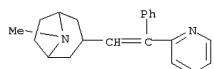
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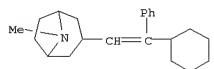
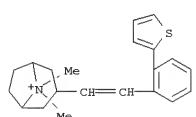
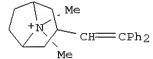
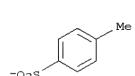
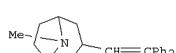
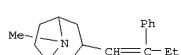
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RN 111979-88-5 CAPLUS  
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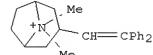
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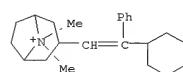
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RN 114402-20-9 CAPLUS  
CN Tropane, 3-( $\beta$ -cyclohexylstyryl)-, hydriodide (6CI) (CA INDEX NAME)● HI  
RN 114723-81-8 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane, 8,8-dimethyl-3-[2-[2-(2-thienyl)phenyl]ethenyl]-, bromide (9CI) (CA INDEX NAME)● Br-  
RN 118801-08-4 CAPLUS  
CN 3-(2-Diphenylvinyl)-8-methyltroponium bromide (6CI) (CA INDEX NAME)CM 2  
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, Tropane, 3-( $\beta$ -ethylstyryl)-, hydrochloride 102544-88-7P,  
Tropane, 3-( $\beta$ -cyclohexylstyryl)-, hydrochloride 102544-89-8P  
, Tropane, 3-( $\beta$ -cyclohexylstyryl)- 102663-21-8P, Tropane,  
3-(2-diphenylvinyl)-, hydrochloride 110147-39-2P, Tropane,  
3-( $\beta$ -pyridylstyryl)- 113927-52-9P, Nortropane,  
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(preparation of)  
RN 88543-22-0 CAPLUS  
CN 8-Azabicyclo[3.2.1]octane, 3-(2,2-diphenylethenyl)-8-methyl- (CA INDEX NAME)RN 101892-62-0 CAPLUS  
CN Tropane, 3-( $\beta$ -ethylstyryl)-, hydrochloride (6CI) (CA INDEX NAME)

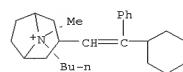
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RN 102544-88-7 CAPLUS  
CN Tropane, 3-( $\beta$ -cyclohexylstyryl)-, hydrochloride (6CI) (CA INDEX NAME)

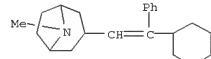
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RN 119040-93-6 CAPLUS  
CN 3-( $\beta$ -Cyclohexylstyryl)-8-methyltroponium bromide (6CI) (CA INDEX NAME)

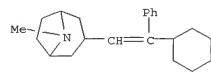
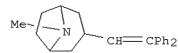
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RN 124111-32-6 CAPLUS  
CN 8-Butyl-3-( $\beta$ -cyclohexylstyryl)troponium iodide (6CI) (CA INDEX NAME)

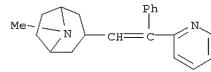
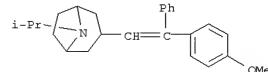
● I-

RN 124138-73-4 CAPLUS  
CN 3-(2,2-Diphenylvinyl)-8-methyltroponium p-toluenesulfonate (6CI) (CA INDEX NAME)  
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CRN 124138-72-3  
CNF C23 H28 N

● HCl

RN 102544-89-8 CAPLUS  
CN Tropane, 3-( $\beta$ -cyclohexylstyryl)- (6CI) (CA INDEX NAME)RN 102663-21-8 CAPLUS  
CN Tropane, 3-(2,2-diphenylvinyl)-, hydrochloride (6CI) (CA INDEX NAME)

● HCl

RN 110147-39-2 CAPLUS  
CN Tropane, 3-( $\beta$ -2-pyridylstyryl)- (6CI) (CA INDEX NAME)RN 113927-52-9 CAPLUS  
CN Nortropane, 8-isopropyl-3-(p-methoxy- $\beta$ -phenylstyryl)- (6CI) (CA INDEX NAME)



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 LAST RELOADED: Feb 8, 2008 (20080208/UP).

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(FILE 'HOME' ENTERED AT 08:21:19 ON 12 FEB 2008)

FILE 'REGISTRY' ENTERED AT 08:21:28 ON 12 FEB 2008  
 L1 STRUCTURE uploaded  
 L2 5 S L1  
 L3 116 S L1 FULL

FILE 'CAPLUS' ENTERED AT 08:21:53 ON 12 FEB 2008  
 L4 13 S L3 FULL

FILE 'STNGUIDE' ENTERED AT 08:24:04 ON 12 FEB 2008

=> log y			
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION	
FULL ESTIMATED COST	0.24	251.58	
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION	
CA SUBSCRIBER PRICE	0.00	-10.40	

STN INTERNATIONAL LOGOFF AT 08:26:44 ON 12 FEB 2008